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| 10/020,294 | 12/18/2001 | Yuji Hanada | P21407 | 8098 |

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EXAMINER

WILSON, JACQUELINE B

ART UNIT PAPER NUMBER

2612

DATE MAILED: 03/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/020,294

Applicant(s)

HANADA ET AL.

Examiner

Jacqueline Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-13 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/18/02 & 05/15/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 9-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 9 recites the limitation "said second I/F connector of another said at least one accessory " in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

The examiner will interpret this limitation as a second I/F connector of another one of said at least one accessory.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. **Claims 1, 2, and 4-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suemoto et al (US 6,075,566) in view of Okamura (US 6,424,156).**

Regarding Claim 1, Suemoto et al teaches an auxiliary power supply unit (referred to as station 30) which is mountable to a portable electronic device (referred to as camera 10) having a battery (see fig. 5, BAT) comprising a charge circuit (40) with unidentified circuitry, and a I/F connector (referred to as multi-connector 31) which is connectable to an I/F connector of the portable electronic device (as shown in fig. 5, 11), the I/F connector of the portable electronic device comprising power terminals connected to the battery (inherent since the battery is charged by station 30 via I/F 31; see fig. 5, 10), wherein the I/F connector of the auxiliary power supply unit includes power terminal (fig. 3, 31) and the auxiliary power supply unit is mounted to the portable electronic device via the power terminals of the I/F connectors (see fig. 1 and 5), which would make the charge circuit and the battery parallel to each other. However, the charge circuit (40) of the auxiliary power supply unit of Suemoto et al is not specifically described in detail regarding the presence of at least one capacitor. Okamura teaches a power supply unit having a capacitor block (referred to as large-capacity capacitor block A and B) consisting of capacitors connected in series, in parallel or in any combination of series and parallel (electric double layer capacitor; see abstract; figs. 3 and 4). The purpose of using a storage capacitor power supply is to accumulate charge for charging a device. Okamura further discloses that a fundamental method of permitting the electric double layer capacitor to rival batteries is to increase energy density and reduce the internal resistance of the battery (col. 6, lines 59+). One having ordinary skill would recognize that by modifying Suemoto et al's charge circuit with the charge circuit of Okamura; the at least one capacitor will be connected in parallel with

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the battery of the portable electronic device such that the power terminal will transmit power from the at least one capacitor for charging the portable electronic device.

Therefore, it would have been obvious to one having ordinary skill in the art to use at least one capacitor in Suemoto et al for the purpose of generating necessary power for charging a camera.

Claim 2 is analyzed and discussed with respect to Claim 1. (See rejection of Claim 1 above.)

Regarding Claim 4, although a video camera (10) is taught, Suemoto et al teaches fails to specifically teach the portable electronic device is a digital camera. However, it is notoriously well known in the art to utilize digital video cameras for capturing still and moving images. Using digital cameras provide easier processing of images and are compatible with other well known devices, such as computers for downloading images and digital printers for obtaining hardcopies. Therefore, it would have been obvious to one having ordinary skill in the art to modify Suemoto et al by using a digital camera for processing ease.

Regarding Claim 5, Suemoto et al teaches the auxiliary power supply unit is attached to the portable electronic device at a position so as not to hinder operability of the portable electronic device (fig. 1 shows the power supply unit 30 with the connector 31 located on the top surface such that the bottom of the camera is mounted; the camera may still be able to operate since the lens unit is in a position to capture images).

Claim 6 is analyzed and discussed with respect to Claim 5. (See rejection of Claim 5 above.)

Claim 7 is analyzed and discussed with respect to Claim 1, wherein the first I/F connector is shown in Suemoto et al's fig. 5, element 11 and the second I/F connector is referred to as multi-connector 31. (See rejection of Claim 1 above.)

Claim 8 is analyzed and discussed with respect to Claim 2. (See rejection of Claim 2 above.)

Regarding Claim 9, Suemoto et al teaches the auxiliary power supply unit I/F connector (31) and the I/F connector of the portable electronic device (11) is multi-connector. Suemoto et al further discloses that various accessories are capable of connecting with the portable electronic device (col. 4, lines 47+) as shown in figure 1 (figs. 10, 11, 12, and 14 also shows the I/F connector 11 of the portable electronic device is connected to different accessories). This reads on the limitation of the second I/F connector of the auxiliary power supply unit and the second I/F connector of another at least one accessory are constructed substantially the same so as to both correspond to the first I/F connector.

Regarding Claim 10, Suemoto et al teaches the first I/F connector comprises control terminals used for communication between the portable electronic device and the at least one accessory (col. 4, lines 64+ indicates various terminals, one of which is an accessories recognition terminal for identify which type of accessory is connected.)

Claim 11 is analyzed and discussed with respect to Claim 4. (See rejection of Claim 4 above.)

3. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi et al (US 6,580,460) in view of Okamura et al (US 6,424,156).

Regarding Claim 12, Takahashi et al teaches a camera body (fig. 1, 117) comprising a battery (109) and a first I/F connector (inherently shown between the connection of the power supply receiving/supplying unit 110 of the camera and the power management unit 119 of the image output device/printer 118), and at least one accessory (printer 118) which is mountable to the camera body (shown by the connections in fig. 1) and includes a second I/F connector (inherently shown in fig. 1 so that the printer can send power to the camera), the at least one accessory being mounted to the camera body via the first and second I/F connectors, wherein one of the at least one accessory includes an auxiliary power supply unit (114) and wherein the camera body (with the battery) and the at least one accessory is in parallel with each other (as shown in fig. 1). However, the auxiliary power supply unit of Takahashi et al does not specifically disclose the presence of at least one capacitor. Okamura teaches a power supply unit having a capacitor block (referred to as large-capacity capacitor block A and B) consisting of capacitors connected in series, in parallel or in any combination of series and parallel (electric double layer capacitor; see abstract; figs. 3 and 4). The purpose of using a storage capacitor power supply is to accumulate charge for charging a device. Okamura further discloses that a fundamental method of permitting the electric double layer capacitor to rival batteries is to increase energy density and reduce the internal resistance of the battery (col. 6, lines 59+). One having

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ordinary skill would recognize that by modifying Takahashi et al's auxiliary power supply unit with the circuit of Okamura, the at least one capacitor will be connected in parallel with the battery when the auxiliary power supply unit is mounted to the digital camera. Therefore, it would have been obvious to one having ordinary skill in the art to use at least one capacitor in Takahashi et al for the purpose of generating necessary power for charging a camera.

Regarding Claim 13, Takahashi et al teaches one of the at least one accessory comprises a printer unit (118).

Allowable Subject Matter

4. Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art neither teaches nor fairly suggests an auxiliary power supply unit which is mountable to a portable electronic device having a battery comprising: at least one capacitor; and an I/F connector which is connectable to an connector of the portable electronic device, the I/F connector of the portable electronic device comprising power terminals connected to the battery; wherein the I/F connector of the auxiliary power supply unit includes power terminals connected to the at least one capacitor; wherein the at least one capacitor is connected in parallel to the battery when the auxiliary power supply unit is mounted to the portable electronic device via the power

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terminals of the I/F connectors, as claimed in Claim 1, wherein the at least one capacitor comprises at least one large-capacity capacitor; wherein in a state where the at least one capacitor is connected in parallel to the battery, **the at least one capacitor discharges to supply power to the portable electronic device when the portable electronic device is in operation, while the battery supplies power to the at least one capacitor to charge the at least one capacitor.**


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Wilson whose telephone number is (571) 272-7322. The examiner can normally be reached on 8:30am-5:00pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (571) 272-7308. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JW
03/16/05


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